

ABSTRACT OF THE DISCLOSURE

5 Described is an electrode array for measuring electrical activity in a subject's biological tissue, comprising an electrode support, a group of electrodes mounted on the electrode support, and an inter-electrode conductive medium having a given resistivity for controlling resistivity between the electrodes of the group. Also, described is a method for controlling the inter-electrode resistivity in the electrode
10 array comprises providing the inter-electrode conductive medium having the given resistivity between the electrodes of the group, and interconnecting the electrodes of the group through this inter-electrode conductive medium to control resistivity between the electrodes. In this manner, when contact between at least one electrode of the group and the subject's biological tissue is poor, an estimate of the
15 electrical activity in the subject's biological tissue is produced on this electrode through the inter-electrode conductive medium, this estimate being a mean value of electrical potentials produced on neighbouring electrodes of the group by the electrical activity in the subject's biological tissue.